Docket No.: 0465-1352PUS1

Application No. 10/537,155 Amendment dated April 9, 2007 Reply to Office Action of January 9, 2007

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Please amend the paragraph bridging pages 1 and 2 as follows:

Next, in the case of using rotatable louvers, a circularly reciprocating motion can be expected in such a manner that the louver moves automatically within a predetermined angle by an electrical motor, etc. In this case, the rotatable louvers change the discharging direction of the flow continuously so that the flow is diffused relatively uniformly and the heat transfer due to the flow can be achieved all over. However, the installation of the rotatable louvers require additional high expenses, and the expenses for its maintenance is are increased. In the meantime, even when installing the rotatable louvers, the flow diffusion and the heat transfer due to the flow diffusion hardly occur beyond the range of the louver operation. Therefore, the conventional flow spreading mechanism has a limitation to fully provide uniform heat transfer.

Please amend the paragraph bridging pages 2 and 3 as follows:

Additional features and advantages of the invention will be set <u>fourth_forth_in</u> the description which follows, and in part will be apparent from the description, or may be learned by practice of the invention. The objectives and other advantages of the invention will be realized and attained by the structure particularly pointed out in the written description and claims thereof as well as the appended drawings.

Please amend the paragraph at page 4, lines 5-14 as follows:

FIGs. 3 and 4 are schematic views of a flow spreading mechanism according to a third and a fourth embodiment of the present invention; <u>and</u>

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[FIGs. 5A and 5B are photographs of experiment results of fluid movements discharged from a conventional simple ducted outlet and from the flow spreading mechanism of the fourth embodiment of the present invention respectively;

FIGs. 6A and 6B are illustrations of flow field simulation results in the space having an outlet installed therein, with the conventional simple-ducted outlet and the fourth embodiment of the present invention respectively; and

FIGs. 7FIG. 5 is a schematic view of a flow spreading mechanism according to a fifth embodiment of the present invention.

Please amend the paragraph at page 6, lines 9-25 as follows:

With reference to FIG. 2A, the operation of the flow spreading mechanism according to the second embodiment of the present invention is illustrated as follows. In the present embodiment, upon considering that one flow is temporarily divided into two by means of the blunt body 110, and the separated flow paths are joined again into one flow path, it is difficult to expect the creation of vortices by the collision of the flows flowing the two separated flow paths, unlike the first embodiment. However, adverse pressure gradient is formed in a flow boundary layer formed on the surface of the blunt body 110 by the existence of the blunt body110, and thereby the flow flowing through the conduit 100 separates at a point on the blunt body 110. As a result, vortices are formed after the separation point, and it becomes possible to form a flow which swings while proceeding by the vortices formed at the both back sides 115 of the blunt body 110; the the two vortices are variable in their size and intensity while having constant frequency which is determined by an introduction rate of the flow, and a shape and size of the blunt body 110; the the discharged flow thus swings right and left while proceeding.

Please delete the paragraph at page 10, lines 1-9 in its entirety as follows:

FIGs. 5A and 5B are photographs of discharged flows obtained in the conventional simple ducted outlet and the flow spreading mechanism of the present embodiment. In the

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meantime, unlike the cases in FIGs. 5A and 5B. which show only the neighborhood of the outlet, FIGs. 6A and 6B show results of flow field simulations in a space in which the outlet is installed, with the conventional simple ducted outlet and the flow spreading mechanism of the present embodiment, resectively. It should be noted that the flow fields of FIGs. 6A and 6B are for a construction including a sink from a fifth embodiment of the present invention, which is described later.

Please amend the paragraph at page 11, lines 11-25 as follows:

Referring to FIG. 7.5, two sinks 400 are further installed in a space 500 in which the flow spreading mechanism of the first to the fourth embodiment of the present invention is installed, and two sinks are provided to face each other in a line traverse to the moving direction of the flow discharged through the outlet 300, and the two sinks 400 include openings. More than one outlets 300 can be installed, and/or one or more than two sinks 400 can be installed for better uniformity of the flow diffusion and the resulting heat transfer inside the space 500. In case that the outlet 300 is installed in the middle of one wall of the space 500, it is preferable, for uniform heat transfer, to install a pair of sinks 400 to face each other in a line traverse to the moving direction of the flow discharged through the outlet 300, as shown in FIG. 5.

Please amend the paragraph bridging pages 11 and 12 as follows:

The operation of the embodiment is illustrated below referring to FIG. 7_5. The flow discharged from outlet 300 substantially goes straight with swing right-and-left, hits the wall 510 of the other side, moves along the wall, hit again-hits against the wall corner 520, and moves along the wall 530 in the direction opposite the discharged direction. Without the sinks 400, the flow cannot spread fully across the space and will disappear halfway because of the loss of energy due to two times of hitting of the flow against the walls and because of the resistance against the air pressure inside the space. However, with the existence of the sinks 400, the air inside the space is dispelled out through the sinks 400 so that the resistance of the flow against the air becomes weaker, and the flow even if it hits the walls two times, can move to the sinks

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400, and can be discharged through the sinks 400. Therefore, efficient heat transfer can be uniformly performed all the way across the space.

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